

EPO - DG 1

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- 16 -

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TS 9512 PCTCLAIMS

1. Sulphur pellet comprising an H<sub>2</sub>S-suppressant, comprising in the range of from 60 to 100 wt% elemental sulphur, based on the total weight of the pellet.
- 5 2. Sulphur pellet according to claim 1, comprising in the range of from 75 to 100 wt% elemental sulphur, preferably from 90 to 100 wt% of elemental sulphur, based on the total weight of the pellet.
- 10 3. Sulphur pellet according to claim 1 or 2, wherein the H<sub>2</sub>S-suppressant is one or more compounds selected from the class of free radical inhibitors and redox catalysts.
- 15 4. Sulphur pellet according to any one of claims 1 to 3, wherein the H<sub>2</sub>S-suppressant is selected from the group of iodine, amine compounds, copper salts, copper oxides, iron salts, iron oxides, cobalt salts and cobalt oxides.
5. Sulphur pellet according to claim 4, wherein the iron salts are iron chloride compounds, preferably selected from the group of ferric chloride, hydrated ferric chloride, ferrous chloride and hydrated ferrous chloride.
- 20 6. Sulphur pellet according to any one of claims 1 to 5, comprising H<sub>2</sub>S-suppressant in amounts in the range of from 0.02% to 10% (w/w), preferably from 0.05% and 6.5%, more preferably between 0.1% to 2.0%, based on the sulphur pellet.
- 25 7. A process for the manufacture of sulphur pellets comprising at least one H<sub>2</sub>S-suppressant, the process comprising the steps of:
  - (a) mixing elemental sulphur, one or more H<sub>2</sub>S-suppressants and optionally a filler in a mixing unit to obtain a mixture;

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- 17 -

(b) shaping and/or pelletising the mixture obtained in step (a) in a pelletising unit to obtain H<sub>2</sub>S-suppressant-comprising sulphur pellets.

8. A process as claimed in claim 7, wherein the elemental sulphur is introduced as molten sulphur, the temperature of the mixture preferably being kept above 113 °C.

9. A process as claimed in claim 7 or 8, wherein the H<sub>2</sub>S-suppressant is one or more compounds selected from the class of free radical inhibitors and redox catalysts.

10. A process to manufacture a sulphur-comprising asphalt paving mixture, the process comprising the steps of:

(i) preheating bitumen at a temperature of between 140 and 180 °C;

15 (ii) preheating aggregate at a temperature of between 140 and 180 °C;

(iii) mixing the hot bitumen with the hot aggregate in a mixing unit,

wherein sulphur pellets comprising H<sub>2</sub>S-suppressant

20 according to any one of claims 1 to 6 are added in at least one of the steps (i), (ii) or (iii), preferably in step (iii).